

WHAT IS CLAIMED IS:

1. A peptide selected from the group consisting of:
 - (a) CPDLHHHMC (SEQ ID NO:1), CLGQHAFTC (SEQ ID NO:2), CSSNTAPHC (SEQ ID NO:3), CHVLPNGNC (SEQ ID NO:4), CKPQYPSLC (SEQ ID NO:5), CQTARTPAC (SEQ ID NO:6), CNQSQPKHC (SEQ ID NO:7), CTPSKISVC (SEQ ID NO:8), CVSPGPRLC (SEQ ID NO:9), CYALSGVPC (SEQ ID NO:10), CKHPPQPFC (SEQ ID NO:11), CHQSKPLLC (SEQ ID NO:12), CPGPFSNWC (SEQ ID NO:13), CPHKTHLPC (SEQ ID NO:14), CVFPLSHYC (SEQ ID NO:15), CNMIAPISSC (SEQ ID NO:16), CTLGMQFQC (SEQ ID NO:17), CTNPTGMLC (SEQ ID NO:18), CSNMAPRSC (SEQ ID NO:19), CSMAPNMSC (SEQ ID NO:20), CSDLTMEAC (SEQ ID NO:21), CPWPYKYSC (SEQ ID NO:22), CFGGNFHRC (SEQ ID NO:23), CLTTSQQTC (SEQ ID NO:24), CTANSGSFC (SEQ ID NO:25), CQEPLDESC (SEQ ID NO:26), CQMSMFARC (SEQ ID NO:27), CPLTPKAYC (SEQ ID NO:28), CNNSHTALC (SEQ ID NO:29), CLSSDITLC (SEQ ID NO:30), CLTHGPKYC (SEQ ID NO:31), CLGKDLRTC (SEQ ID NO:32), CAPKTHPLC (SEQ ID NO:33), CPTGLMKYC (SEQ ID NO:34), CTWKAPLQC (SEQ ID NO:35), CSHILGPSC (SEQ ID NO:36), CLSTSQYSC (SEQ ID NO:37) or CXXPTPPXC (SEQ ID NO:44);
 - (b) amino acids 1-8 of a peptide according to (a);
 - (c) amino acids 2-9 of a peptide according to (a); and
 - (d) amino acids 2-8 of a peptide according to (a).
2. The peptide of claim 1 selected from the group consisting of CPDLHHHMC (SEQ ID NO:1), CLGQHAFTC (SEQ ID NO:2), CSSNTAPHC (SEQ ID NO:3), CHVLPNGNC (SEQ ID NO:4), CKPQYPSLC (SEQ ID NO:5), CQTARTPAC (SEQ ID NO:6) and CXXPTPPXC (SEQ ID NO:44)
3. A conjugate of the endothelial cell targeting peptide of claim 1 and a biological agent.

4. The conjugate of claim 3, wherein said biological agent is selected from the group consisting of drugs, peptides, proteins, radionuclides, nucleic acids, gene delivery vectors and liposomes.
5. The conjugate of claim 3, wherein said biological agent is a gene delivery vector selected from the group consisting of SV40 virus, bovine papilloma virus, adenovirus, adeno-associated virus and herpes simplex virus.
6. The conjugate of claim 5, wherein said gene delivery vector is an adenovirus.
- 10 7. The conjugate of claim 6, wherein said adenovirus comprises a nucleic acid encoding a fiber protein modified to include said endothelial cell targeting peptide.
- 15 8. The conjugate of claim 4, wherein said biological agent is a gene delivery vector which is a retrovirus.
9. The conjugate of claim 8, said retrovirus comprises a nucleic acid encoding a surface protein modified to include said endothelial cell targeting peptide.
- 20 10. The conjugate of claim 4, wherein said protein is a growth factor or growth factor fragment.
11. A viral vector comprising a nucleic acid encoding a protein modified to include the peptide of claim 1.
- 25 12. The viral vector of claim 11, wherein the vector is derived from a virus selected from the group consisting of SV40 virus, bovine papilloma virus, adenovirus, adeno-associated virus and herpes simplex virus.
- 30 13. The viral vector of claim 12, wherein said virus is an adenovirus.
14. The viral vector of claim 13, wherein said modified protein is a fiber protein.

15. The viral vector of claim 12, wherein said virus is a retrovirus.
16. The viral vector of claim 15, wherein the modified protein is a surface protein.
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17. A viral vector particle comprising a protein modified to include the peptide of claim 1.
18. The viral vector particle of claim 17, wherein the vector particle is derived from a virus selected from the group consisting of SV40 virus, bovine papilloma virus, adenovirus, adeno-associated virus and herpes simplex virus.
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19. The viral vector particle of claim 18, wherein said virus is an adenovirus.
20. The viral vector particle of claim 19, wherein said modified protein is a fiber protein.
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21. The viral vector particle of claim 19, wherein said modified protein is sCAR.
22. The viral vector of claim 17, wherein the vector is derived from a retrovirus.
- 20 23. The viral vector of claim 22, wherein the modified protein is a surface protein.
24. A nucleic acid encoding a modified viral protein comprising a peptide according to claim 1.
- 25 25. The nucleic acid of claim 24, wherein the viral protein is a protein derived from a virus selected from the group consisting of SV40 virus, bovine papilloma virus, adenovirus, adeno-associated virus and herpes simplex virus.
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26. The nucleic acid of claim 25, wherein the viral protein is a fiber protein.
27. The nucleic acid of claim 24, wherein the viral protein is a protein derived from a retrovirus.

28. The nucleic acid of claim 27, wherein the viral protein is a surface protein.
29. A nucleic acid encoding a fusion protein comprising a peptide according to claim 1 and a biologically active peptide or protein.
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30. The nucleic acid of claim 29, wherein said biologically active peptide or protein is selected from growth factors, toxins, angiogenic peptides, antiangiogenic peptides and pro-apoptotic peptides.
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31. A fusion protein comprising a peptide according to claim 1 and a biologically active peptide or protein.
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32. The fusion protein of claim 31, wherein said biologically active peptide or protein is selected from growth factors, toxins, angiogenic peptides, antiangiogenic peptides and pro-apoptotic peptides.
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33. The conjugate of claim 4, wherein said biological agent is a drug which is a cytotoxic agent.
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34. A pharmaceutical composition comprising the conjugate of any one of claims 3-33 and a pharmaceutically acceptable carrier.
35. A method of targeting a therapeutic substance to endothelial cells which comprises administering the pharmaceutical composition of claim 34.
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